

ABSTRACT

A method for the production of an InP single crystal includes gradually cooling a molten raw material held in contact with a seed crystal to solidify the molten raw material from a lower part toward an upper part of an interior of a crucible and grow a single crystal, causing the seed crystal to possess an average dislocation density of less than $10000/\text{cm}^2$ and assume substantially identical cross-sectional shape and size with a cross-sectional shape and size of a single crystal to be grown, and allowing the InP single crystal to be grown to retain a non-doped state or a state doped with Fe or Sn.